

F. R. STEHM.

CAR.

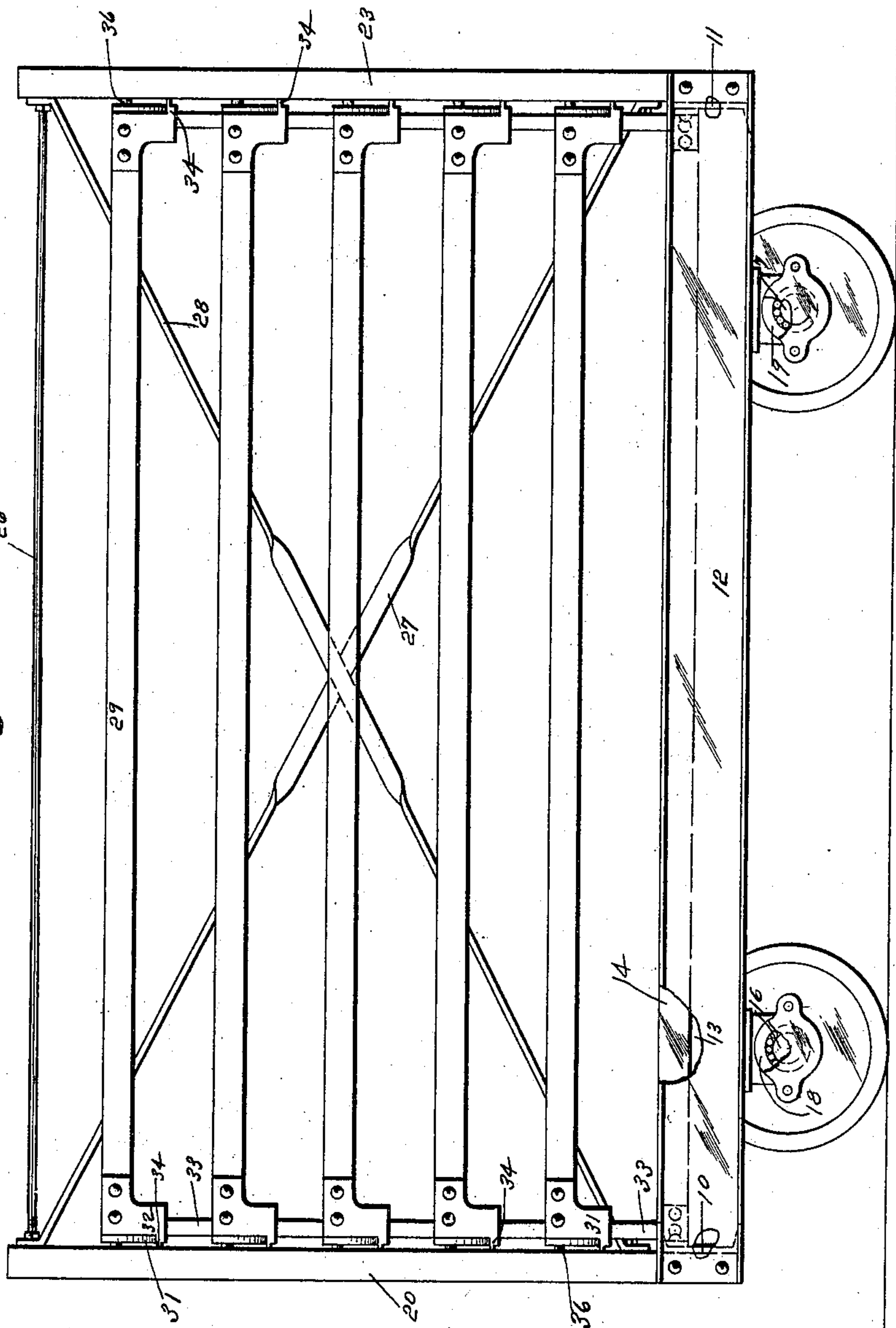
APPLICATION FILED JAN. 27, 1908.

982,103.

Patented Jan. 17, 1911.

3 SHEETS—SHEET 1.

Fig. 1



Witnesses.
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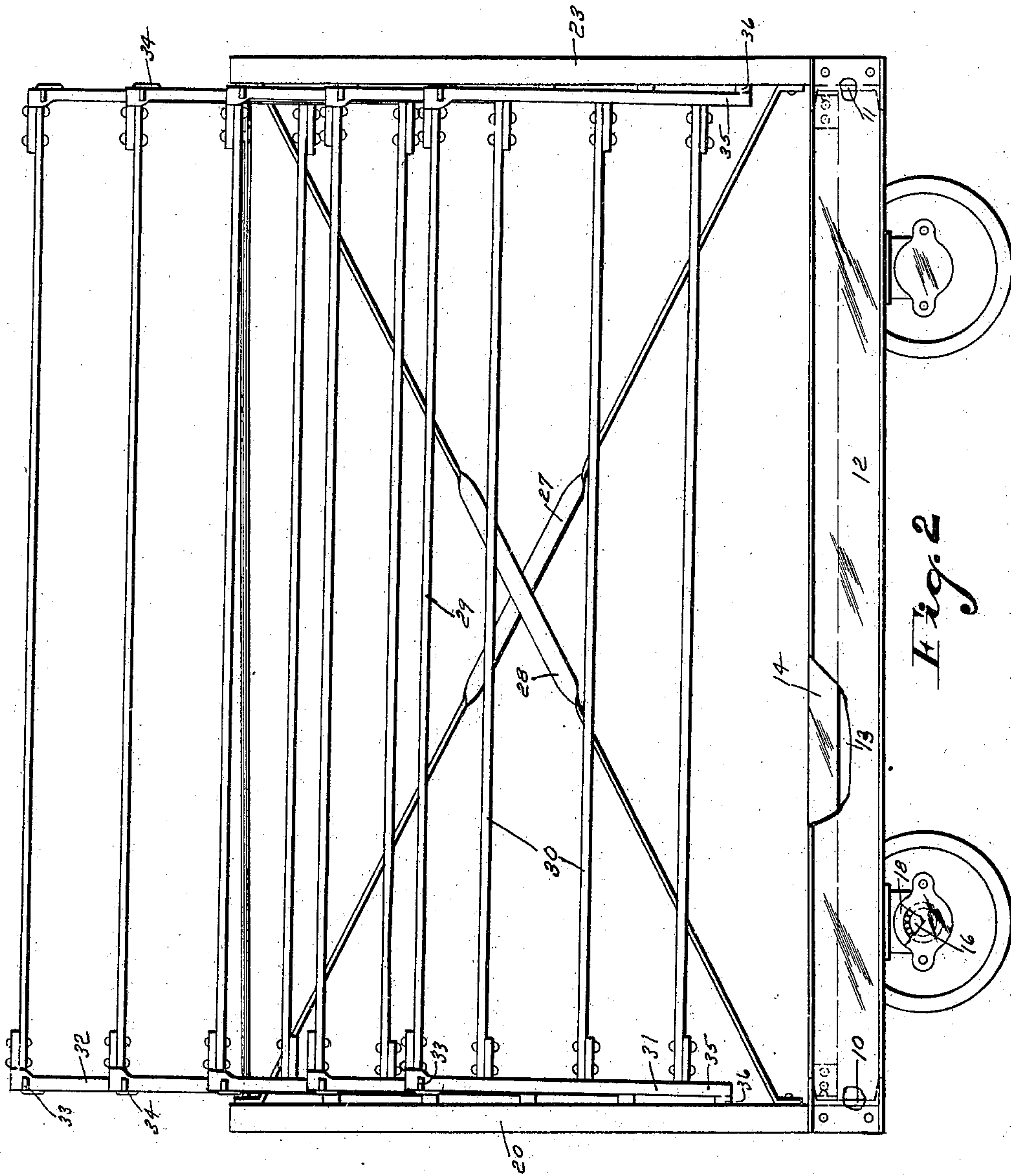
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3 SHEETS-SHEET 2.



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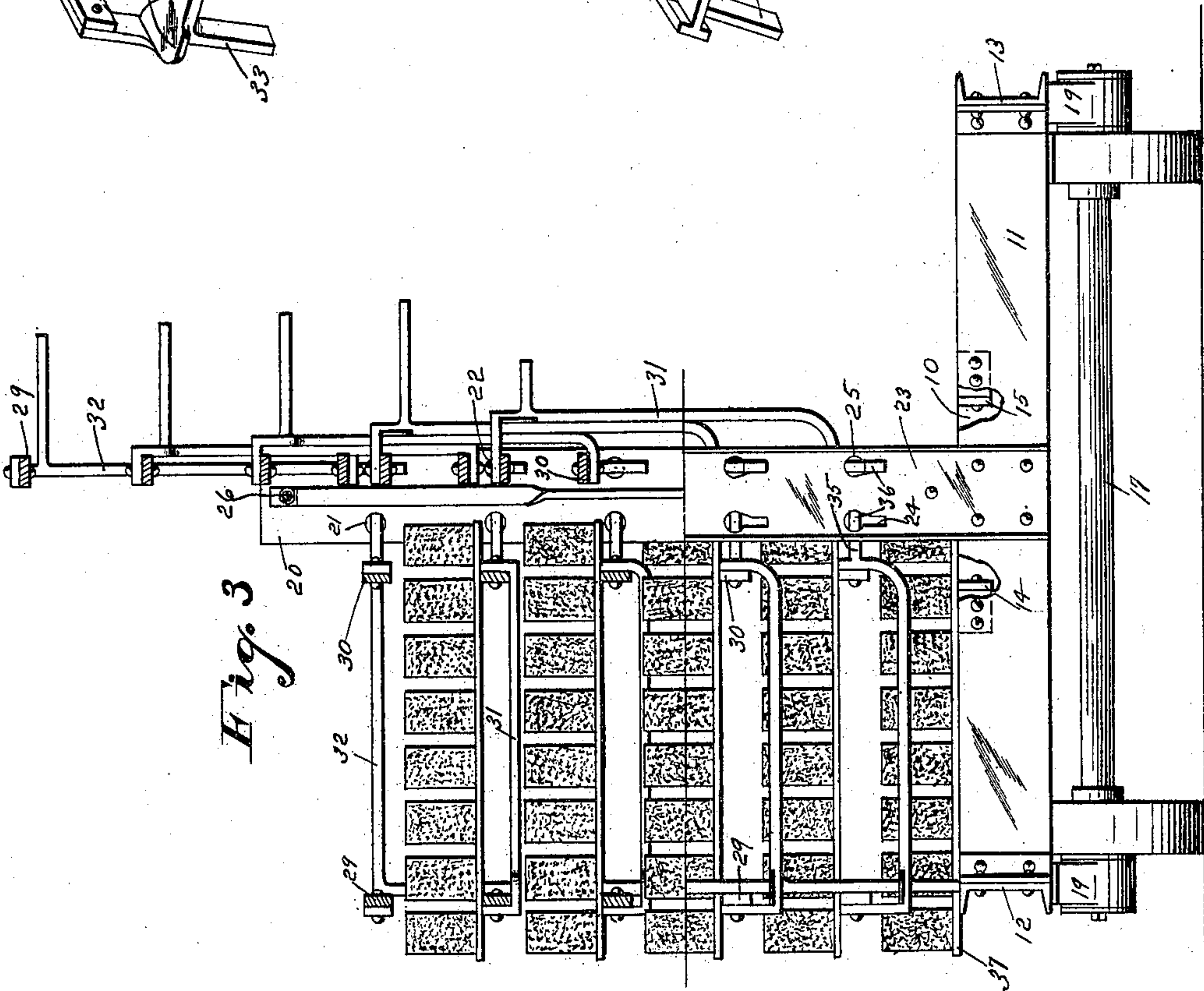
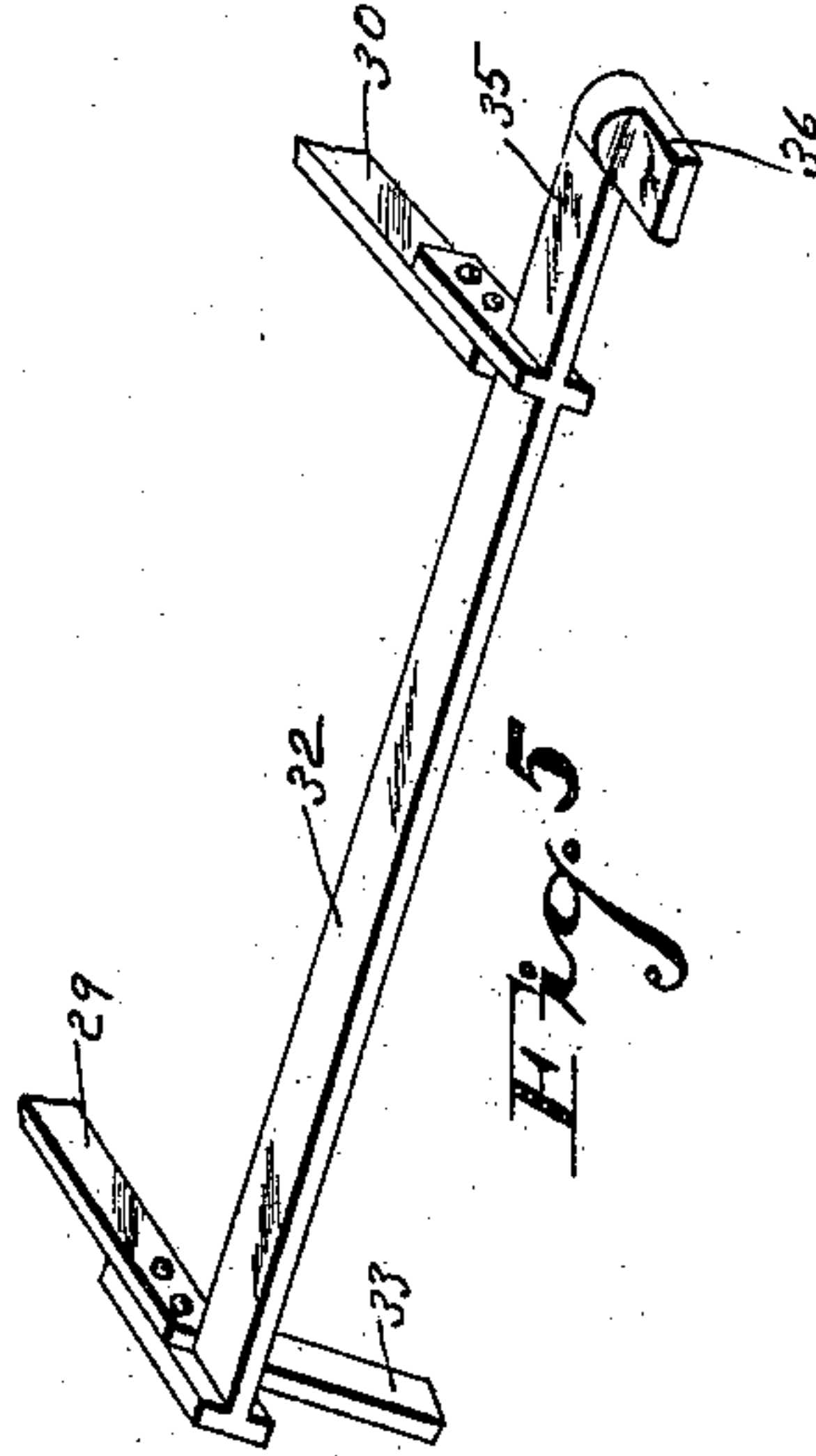
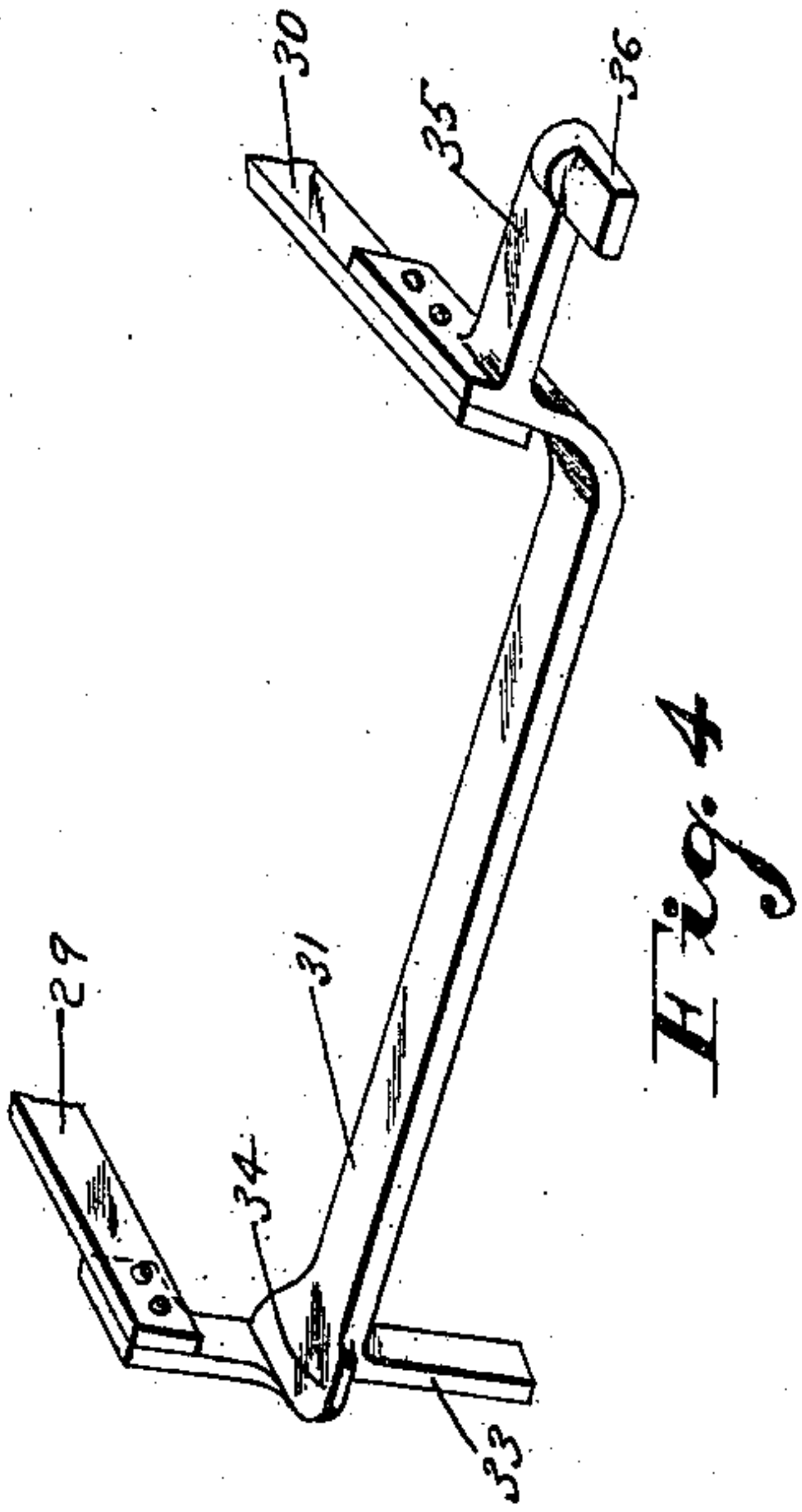
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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982,103.

Specification of Letters Patent. Patented Jan. 17, 1911.

Application filed January 27, 1908. Serial No. 412,817.

To all whom it may concern:

Be it known that I, FRANK R. STEHM, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Car, of which the following is a specification.

The objects of my invention are to provide a car, having in its construction a series of racks, designed to support articles which should be kept separate from each other, owing to the likelihood of their being damaged by contact with each other, and further to provide racks, so supported, constructed and arranged relative to each other that they may be maintained in a folded position.

A further object is to so construct the mechanism for supporting the racks in an elevated or folded position that they may be readily unfolded one at a time, commencing with the lowermost to a position above the frame of the car where they can be loaded readily while the rest of the racks are maintained in their elevated or folded position; that is, each rack is filled before the one above it is lowered to receive its load.

My invention consists in certain details in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my car with the racks in the position in which they stand when loaded. Fig. 2 is a side elevation of the car with the racks elevated and folded in which position they are maintained before receiving their loads. Fig. 3 is an end elevation (with the upper part of the end of the car broken away to show the construction of the opposite end) showing the racks on one side of the car lowered and loaded, and the racks on the opposite side of the car elevated and folded. Fig. 4 is the end piece of one of the racks which is used in all except the uppermost rack on each side of the car, and Fig. 5 is the end piece of the uppermost rack on each side of the car.

Referring to the accompanying drawings, it will be seen that I have provided a truck having a frame comprising two end pieces 10 and 11 and two side pieces 12 and 13 preferably made of channel iron, rigidly secured together by bolts. Extending longitudinally

of the frame, and substantially parallel with its sides are two longitudinal braces 14 and 15 secured at their end portions to the ends of the frame. These braces serve the double function of assisting in the maintenance of the parts of the frame rigidly together, and also of forming a rest for the pallets or boards which support the articles when placed upon the car; that is, these braces 14 and 15 and the sides 12 and 13 serve the function of two of the racks, hereinafter described, and thus permit all of the space in the car to be utilized.

The frame is mounted on four wheels, two of which are mounted on each of the axles 16 and 17. The axle 16 is mounted in roller bearings 18 secured to the sides 12 and 13 of the frame and near the end piece 10 thereof. The axle 17 is mounted in the bearings 19, secured to the sides 12 and 13 of the frame and near the end 11 of it. On account of the construction of the bearings, axles and wheels, the car may be placed upon a track and easily moved from place to place.

Secured to the end piece 10 of the frame of the car and extending upwardly therefrom is an upright 20, designed to support one corner of each rack. Extending through the sides of the upright are two series of circular openings 21 and 22, designed to receive the lug or bearing at the inner corner of one end of each rack, as shown clearly in Fig. 3 of the drawings. At the other end of the frame, and extending upwardly from the central portion of the end piece 11 is an upright 23, designed to support the opposite inner corner of each rack, from that supported by the upright 20.

Extending through the sides of the upright 23 are two series of openings 24 and 25, each opening being formed circular at its upper end and angular at its lower portion and adapted to receive the lug which supports the opposite corner of each rack from that supported by the upright 20 in such a way that when the lug is in the circular portion of the opening, the rack may be raised or lowered, and when the rack reaches its elevated position, the lug which forms its bearing, will drop into the angular portion of the opening, and the rack will be maintained at its upper limit of movement as shown in the right side of the view shown in Fig. 3.

Connecting the upper ends of the uprights 20 and 23 is an adjustable rod 26. Connect-

ing the upper end of the upright 20 with the lower end of the upright 23 is a brace rod 27. Connecting the lower end of the upright 20 with the upper end of the upright 23 is a brace rod 28. These rods 26, 27 and 28 are designed to rigidly support the uprights 20 and 23 in position relative to each other.

Pivotaly mounted between the uprights 20 and 23 are the two series of racks, hereinafter referred to, which are designed to receive the material to be transferred by these cars. Each rack comprises an outside bar 29 and an inside bar 30, which I have rigidly secured to their ends the end pieces 31 and 32. Each end piece 31 and 32 has in its construction a leg 33 which is designed to rest upon either the frame of the machine or the end piece immediately beneath it. The body portion of each end piece is enlarged at 34 to support the leg of each end piece immediately above it, and this body portion is secured to the leg 33 some little distance below the point of attachment of the leg to the side piece 29, and the inner end of the body portion of this end piece is bent upwardly to form a point of attachment for the rear side piece 30.

Integral with the bent up portion of the body of the end piece is a shank 35 having an angular extension 36 on it, which has two rounded surfaces, and two flat surfaces, the flat surfaces being substantially parallel with each other. The extensions 36 of the end pieces 31 and 32 are designed to enter the openings 21 and 24 respectively on one side of the frame, and the openings 22 and 25 respectively on the opposite side of the frame, so that the racks may be swung on these extensions, the circular portion of the openings 24 and 25 being so arranged that the extensions will swing freely in them as well as in the openings 21 and 22, until the rack reaches its upper limit of movement, when the extensions 36, which enter the openings 24 and 25, will fall into the angular portions of these openings, and the rack will be maintained in its elevated position.

The curved portion of the end pieces 31 and 32, caused by bending up the inner ends of these end pieces is considerably greater in those end pieces which are nearest the bottom of the series of racks, and the curved portion is diminished somewhat; that is, the angle is made sharper as the top of the car is approached to provide for perfect nesting, or folding together of these parts relative to the uprights, as shown clearly in Fig. 3. In the uppermost racks, the body portion of the end pieces is made perfectly straight, as shown clearly in Fig. 5, and the legs are attached to the under side of the end pieces.

In the practical use of the device, and assuming that all of the racks are in their elevated position, as shown in Fig. 2, of the

drawings, and that it is desired to fill these racks with bricks or other material, in the way in which it is to be ordinarily used, the operator has the bricks or other material preferably placed upon a pallet or board 37, a series of which boards are laid in a row upon the side of the frame 12, and the brace 14, assuming that this side of the car is to be filled first. When the space provided by the side 12 and the brace 14 has been filled, as shown in Fig. 3, the rack immediately above it is elevated slightly at one end, so that the pivotal extension 36 is drawn out of the angular portion of the slot 24 into the curved portion thereof, so that the rack may be lowered into position where a series of boards or pallets with brick thereon may be laid on the side pieces of the rack 29 and 30, until this rack has been filled, when the operation is repeated as to the rack above it, and so on until the racks on one side of the car have been filled, when the other side may be loaded. In use, however, it is customary to fill both sides of the car at the same time, one man working on one side, and one on the other, to load the car as quickly as possible. The construction of the car is particularly adapted for such use. In removing the objects; namely by the racks, the reverse operation is performed; that is, the uppermost rack is elevated after the articles upon it have been removed, and is maintained in an elevated position while the racks below in succession are being unloaded.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, therefor is—

1. In a device of the class described, a truck, a series of racks pivotaly mounted on the truck with their pivotal points in substantially vertical alinement, said racks being of such shape that when they are in their elevated position, each will be substantially vertical, and the pivotal connections of racks be so arranged that each may be swung from its horizontal position to a vertical position and when it reaches the vertical position it is automatically secured in this position.

2. In a device of the class described, a truck, a support connected with the truck, a series of racks pivotaly mounted in said support and arranged to stand substantially parallel with each other in a substantially horizontal position and also being so arranged as to stand approximately in line with each other vertically when in their elevated positions, and means for supporting the outer ends of each rack in proper position relative to the rack beneath it.

3. In a device of the class described, a truck, supports carried by the truck, a series of racks pivotaly mounted on said supports, the pivotal points of said rack being substantially in vertical alinement with each

other, and each rack being so shaped that, when they are in their elevated positions, each will be substantially vertical, and means for supporting the outer ends of each
5 rack when swung to a horizontal position, said racks so arranged that they may be swung down, one at a time to receive articles to be placed upon it, and so arranged that each one of the racks may be swung from
10 a horizontal to a vertical position separately for the purposes stated.

4. In a device of the class described, a truck, supports carried by the truck, a series of racks pivotally mounted on said supports, the pivotal points of said rack being
15 substantially in vertical alinement with each other, and each rack being so shaped that, when they are in their elevated positions, each will be substantially vertical.

20 5. In a device of the class described, a truck, supports carried by the truck, a series of racks carried by said supports, and all of said racks being pivotally connected to the supports with their pivotal points in ver-
25 tical alinement, the upper one of said racks

being substantially flat and the lower ones being so shaped that the body portions of the racks may stand in substantially vertical positions when said racks are elevated.

6. In a device of the class described, two 30 uprights, each having a series of openings therein substantially round at their upper portions and having narrowed straight sides at their lower portions, and a series of racks each comprising two flat pivotal supports 35 mounted in the openings of said uprights and so arranged that when said pivotal supports are in the upper portions of said slots, the racks may rotate in said slots, and when
40 the racks are moved to substantially vertical positions, the flat supports will enter the narrow portions of said slots and automatically secure the racks in substantially vertical positions.

Des Moines, Iowa, Nov. 15, 1907.

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Witnesses:

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